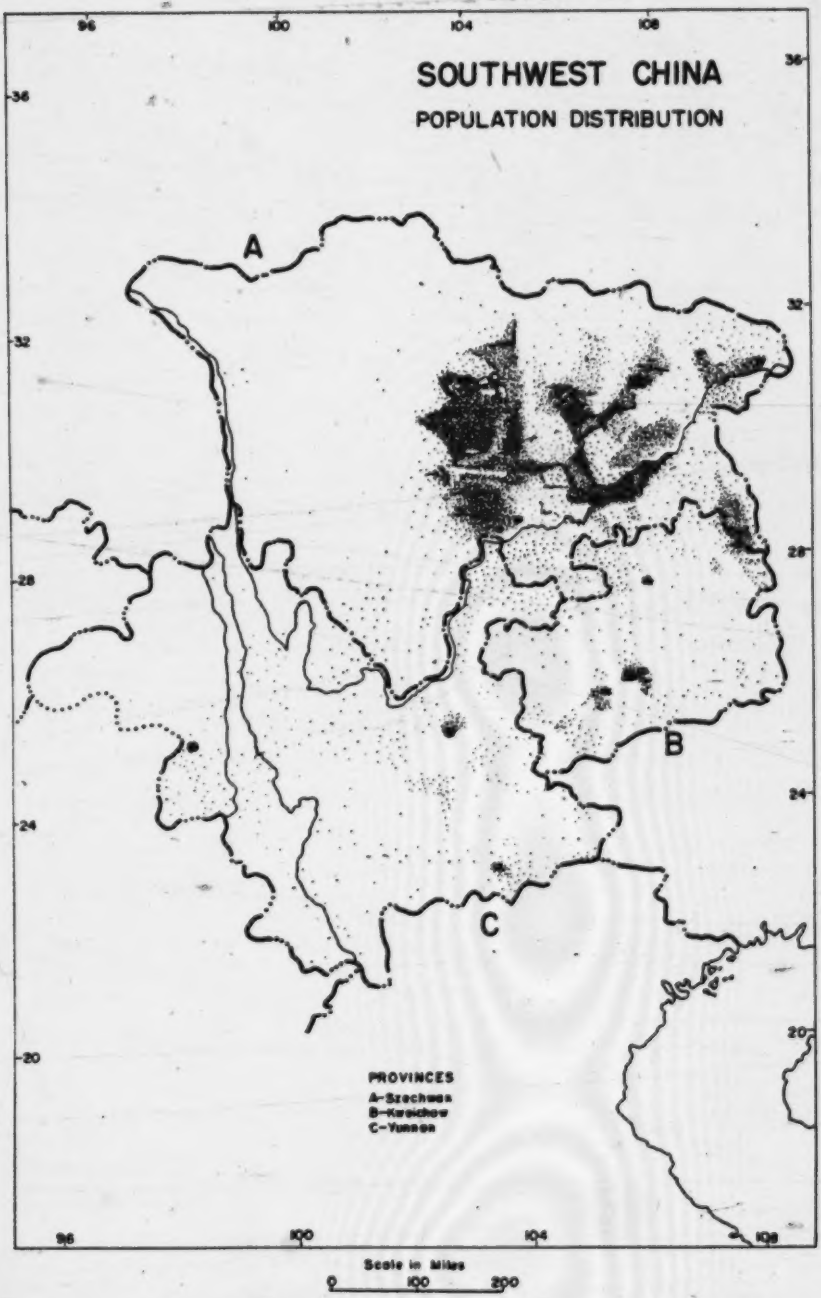
1:Stanford U. S-4, 5 1956 AF16 SW China AF16



[facing p. 54]

1:Stanford U. S-4, 5 1956 AF16 SW China AF16

II. COMPOSITION OF POPULATION

A. Age Groups

162 The young and middle-aged groups constitute the preponderant section of population in the Southwest Region. The 1953 census showed that of the 747,000 people in Chengtu, Szechwan Province, 380,000 (58 per cent) were 18-45 years of age. And in Nan-pu hsien, youths of 18 and under stood as high as 44 per cent of the total.[9] The situations in many other localities in the Southwest China Region are similar. An earlier study of the population in Yunnan communities arrived at very close percentage figures. The information collected was evaluated and tables were compiled which showed that the 15-44 age group stood at 46.91 per cent in the Kunming Lake region (the central region of Yunnan Province) and 42.71 per cent at Ch'eng-kung.[10] The Chinese study was completed in 1942; a comparable study in the United States was compiled for the year 1930 and gives the national average for the same age group as 47.7 per cent.

---

9. Ibid.

10. Chen Ta, Population in Modern China, Chicago, University of Chicago Press, 1946, pp. 85-86.

1:Stanford U. S-4, 5 1956 AF16 SW China AF16

B. Sex Ratio

962 The national average sex ration is 51.82 per cent for males and 48.18 per cent for females, or 107.55 males for every 100 females. Because no regional breakdown on sex ratio has been announced since the completion of the 1953 census, the latest information available is offered for reference:

Table 5. Sex Ratio of Southwest China Population (1948)
(Number of males per hundred females)

Kweichow	100.56
Sikang	100.67
Szechwan	104.73
Yunnan	100.82
Regional Average	103.47

*Statistical Abstracts of the Republic of China, pp. 20-21.

If the 1948 ratio still holds, it means that the Southwest Region has a higher ratio of women than the national average, and this could be the result of several conditions: (1) frequent civil wars in this region, reducing the number of men rather than the number of women. (2) reduction of the practice of female infanticide, because in

1:Stanford U. S-4, 5 1956 AF16 SW China AF16

this region women have proved their usefulness by participation in farm work; and (3) the drain of able-bodied males during World War II when China depended almost exclusively on this region for troop replacements. (4) possible under-reporting of figures for males, who were attempting to dodge the draft.

C. Rural and Urban Composition

The result of the 1953 census shows that there has been a rapid increase in urban population, particularly in metropolitan and industrial centers. While in this region there are fewer large industrial capitals comparable to those in the Northeast and Central South regions, cities like Chengtu do bear evidence of this population trend. On the national scene, the increase in urban population is impressive, amounting to 40 per cent in certain cities as compared to their 1950 figures. The total population of the China Mainland is divided into 13.25 per cent for urban and 86.74 per cent for rural.[11] However this percentage is clearly based on dissimilar criteria for "urban" and "rural" than those used in the Nationalist estimates of 1947:

11. People's Daily, Peking, Nov. 1, 1954, p. 3.

1;Stanford U. S-4, 5 1956 AF16 SW China AF16

112

Table 6. Rural and Urban Population in Southwest China (1947)

	Rural	Urban
Kweichow	6,182,000	3,911,750
Sikang	1,668,000	28,600
Szechwan	38,957,000	8,481,387
Yunnan	7,169,000	1,896,921
Regional	53,976,000	14,397,658

*Chung-hua Min-kuo Nien-chien [The China Yearbook], Taipei, Chung-hua Min-kuo nien-chien she, 1953, p. 34.

According to Table 6, the percentage of rural population for this region in 1947 was only 75.72 per cent, which is in closer agreement with earlier statistics[12] on scattered localities in this region, such as the province of Yunnan, which had a "rural" population of 70.96 per cent in the early 1930's. As we have noted, there is a difference between the Communist and Nationalist criteria for "urban" and "rural". The Nationalist government have traditionally used the farming population for "rural," while the Communist authorities are apparently drawing

12. Yun-nan-sheng Nung-ts'un Tiao-ch'a [Survey of Villages in Yunnan Province], p. 12.

1:Stanford U. S-4, 5 1956 AF16 SW China AF16

162

the line between communities with populations above or below a certain unspecified number.

D. Occupational Composition

The breakdown of the population by profession has not been released by the government on the China Mainland; not even fragmentary information, either national or regional, is available. Earlier studies also fall short of completeness. The following data on the population of Yunnan in the early 1930's, while outdated, may offer some information on the occupations of the people in this region. Yunnan appears to be a medium between the rich Chengtu Basin in Szechwan and the thinly populated mountains of former Sikang Province.

1;Stanford U. S-4, 5 1956 AF15 SW China AF16

162

Table 7. The Occupational Breakdown of Yunnan Population (1935)*

	Percent
Farmers	43.74
Workers	12.73
Merchants	3.04
Students, teachers	0.78
Government, army	1.01
Housewives	29.04
Self-employed†	0.19
Unemployed	6.32
Totally disabled	2.42
Others#	0.72

† Includes artists, physicians, lawyers, etc.

Includes gambling house operators and members of other professions not socially condoned.

* Yün-nan-sheng Nung-ts'un Tiao-ch'a [Survey of Yunnan Villages], Shanghai, Commercial Press, 1935, pp. 13-14.

E. Some Earlier Observations

The Bureau of Statistics of the Central Government at Nanking in 1948 released the results of some cross-section surveys of China's population. The data was collected mainly before and during World War II in the Southwest China

• 12

Region. The following excerpts may furnish some additional points for comparison:[13]

1. Population surveys of fifteen municipalities and hsien in the Southwest China Region from 1933-44 showed that on the basis of the age breakdown the population of this region as a whole was of a "stable" nature and only slightly inclined toward the "increasing type."

2. The same surveys also disclosed that while the sex ratio in these representative communities was generally well balanced before World War II began, the picture was quite noticeably altered during the war when the number of able-bodied males decreased sharply. This might have been caused by intensified conscription and by the falsification of reports on age in order to evade conscription.

3. The married population averaged 63-78.23 per cent of the total marriageable population. Out of the total population, those with middle-school education amounted to less than 2 per cent and those with college education, below 1 per cent.

---

13. Chung-hua Min-kuo T'ung-chi Nien-chien [Statistical Yearbook of China], Nanking, Bureau of Statistics, 1948, pp. 50-65.

162 4. A separate survey conducted during January-June 1947 in two large cities in this region further indicated that the age of fathers at the birth of first child was 20-35, and for mothers, 20-25. The mortality rate was highest in the 0-5 and 50-60 age groups. Pulmonary and typhoid diseases took the heaviest toll.'

III. INTERNAL MIGRATION

166 The Southwest Region is singular in China's history of internal migration in that it has seen two large-scale migrations into this region within the past five hundred years. The first mass migration took place when the population of Szechwan Province was nearly exterminated during the chaos that marked the end of the Ming Dynasty (circa A.D. 1640). The succeeding authorities decreed migrations from Hunan and Hupeh provinces east of this region and encouraged voluntary migration from any area by promising land to the settlers. Over 1,700,000 settlers were recorded in the period[14] 1667-1707. [722] The second mass migration occurred after the 1937 Japanese invasion of China, when a huge number of people fled the northern and the coastal provinces west of this region. The latter migration is discussed in Chen Ta's Population of Modern China, which includes an analysis of

14. Lou Yün-lin, op. cit., p. 36.

1:Stanford U. S-4, 5 1956 AF 16 SW China AF16
AF16
563
in the four provinces in Southwest China. Some of the groups are said to have migrated from Tibet; others, driven from their lands by the Han Chinese, sought refuge in the Southwest. The Han Chinese came later, and are now chiefly found in the plains and more accessible valleys.

These peoples, forming successive migratory waves from different parts of the continent, developed for a long time side by side without much intermingling. Cut off by high mountain ridges and unnavigable rivers, many have preserved their original languages and ancient customs, which are still in use today.

563
162 There are more than 35 million people belonging to non-Han ethnic groups in China, constituting 6 per cent of the total national population and occupying more than one-half of the national territory.[1] Of the ten ethnic groups each having more than one million people, the Tibetans, Yi, Miao, Pu-yi, and Hui are represented in the Southwest in large numbers. The Southwest alone has 20 to 21 million people belonging to non-Han ethnic groups, constituting 20 per cent of the total regional population, and more significantly, dwelling along more than 3,000 miles of the national boundary.[2]

---

1. Communique of "Results of Census and Registration of China's Population," Current Background, No. 301, Nov. 1, 1954, Hong Kong, American Consulate-General.

2. Wang, Wei-chou, "Hsi-nan Min-tsu Kung-tso Ch'ing-hsing" ["The State of the Nationalities Work in the Southwest"] , Min-tsu Cheng-t'se Wen-hsien Hui-pien [Compendium of Writings on Nationalities Policies] , Peking, Jen-min chu-pan-she, 1953, p.124.

1:Stanford U. S-4, 5 1956 AF 16 SW China AF16

II. THE HAN CHINESE IN THE SOUTHWEST

In the Southwest the Han Chinese appear to greatly outnumber the non-Han Chinese. This is because the Han Chinese are mostly settled in cities, towns, and more accessible areas. Moreover, many tribesmen who dress like Han Chinese peasants may be mistaken for Han Chinese. The Han Chinese in this region are generally divided into (a) the native Han Chinese (Lao-han-jen or old Chinese), who have been there for at least 200 years and have intermarried with the aborigines, and (b) the immigrant Han Chinese (sometimes called K'echia) who came later.

A. Szechwan

In this province, the native Han Chinese have spread in the south and west. The more recently arrived Han Chinese of Hunan and Hupeh origin are to be found in the western, eastern, and southern parts of the province; those of Honan, Anhwei, and Kiangsi origin, in the southern part of the province; and those of Shensi and Kansu origin, in the western and northern parts of the province. Cities like Chengtu and Chungking have other Han Chinese from Kwangtung, Fukien, Chekiang, and Kiangsu.[3] The Manchu government in the mid-seventeenth century encouraged immigration into Szechwan with the promise of land, and more than 1,700,000 Han Chinese migrated.[4] Many others who settled in Szechwan had been traders or government officials.

B. Sikang

The migration of Han Chinese into this province started in the T'ang (618-907 A.D.) and Sung (960-

423 landowners, and less than 3 per cent in the hands of the middle and poor peasants.[5] He came to the conclusion that as 40,000 people out of a total population of 57,400,000 were on the verge of starvation, the policy of Mao Tse-tung was justified and should be carried out.

745 162 In this period it was also found that there was a large number of persons in Southwest China who depended upon the government for a living. Teng Hsiao-p'ing reported on April 11, 1950 that there were 900,000 disbanded Kuomintang soldiers, 400,000 old civil service men, and 700,000 Communist soldiers. He emphasized that if they were not well-fed, a state of disorder might result.[6] The Communists considered the collection of a grain levy on the whole population in order to feed the armies and the civil service men as the most urgent need at this time.

669 The Communists were greatly concerned that the Kuomintang members would make trouble. Their fears were confirmed when the rebellion led by Li Mi and Yü Ch'eng-wan, two Kuomintang generals, took place in Kunming. Part of the 2nd and 4th field armies were sent from southern Kwangsi to Yunnan, and the rebellion was quickly stamped out, although the rebel leaders succeeded in escaping to the border of Burma.

---

5. Ibid., p. 1006.

6. Ibid., p. 991.

178 Another problem was the number of steel
499 plants and textile mills which had been estab-
653 lished in the Southwest during war against Japan. The years of civil war in 1949 and 1950 had produced a depression, and industry and commerce could no longer maintain themselves. As a remedy the Communists proposed the construction of the Chungking-Chengtu Railroad. In spite of the great financial difficulties in which the Communist central government was involved at that time, it was decided to invest an amount of money equivalent to 76,000,000 catties of rice for highway construction and 180,000,000 catties for railroad construction. These projects stimulated the revival of the steel, coal, and electrical engineering industries and the economic condition of Szechwan gradually improved.

563 A further problem special to this region was
162 that of the national minorities which amounted, according to the latest census and the report of Wang Wei-chou, to about 12 million

Tibetans	2,775,627
Yi People	3,254,269
Miao People	2,511,339
Chung-chia	1,600,000
Mohammedans	1,000,000
Min-chia	600,000
Thai People	400,000
Total	12,341,235

636 In order to meet the demands of these minorities,
563 autonomous areas were established. The Tibetans in Sikang constitute a special area, even though

1:Stanford U. S-4, 5 1956 AF16 SW China
~~AF15~~ AF16

Annex "A," Subparagraph 3a,
Economic Background

AGRICULTURE

433
241

I. INTRODUCTION

The Southwest China region is formed of four provinces - Szechwan, called "the heavenly kingdom"; Sikang, an area of awesome mountains and dense forests; Yunnan, home of many different brother nationalities; and Kweichow, the settlement of the Miaos. The topography varies considerably, the climate is as variable, and crops are raised in abundance. The Red Basin in Szechwan, watered by the Yangtze and its tributaries, is especially fertile, and the Chengtu plain is one of the most famous rice producing areas in China. In addition to being the richest province for grain production in Southwest China, Szechwan also produces large quantities of cotton, tung oil, sugar cane, silk, rapeseed, and fruit.

II. CULTIVATED LAND AND RURAL POPULATION

• 162

The total population of Southwest China is a little over 98 million,[1] according to a

1. Jen-min Jih-pao [People's Daily], Peking, Nov. 1, 1954, p. 1.

1:Stanford U. S-4, 5 1956 AF16 SW China
AF16

census completed by the Communists in June 1953. If we assume the ratio of rural and urban populations to be 87 to 13, the rural population in the Southwest Region in 1953 was approximately 85 million.[2] A comparison of the rural population and the total amount of cultivated land in this region in the years 1946 and 1953 is presented in Table 1.

Table 1. Cultivated Land and Rural Population of Southwest China*

Unit = 1,000. S = shih-mou. A = acres.

Province	Year	Cultivated Land	Rural Population	Farm Households	Shih-mou (acres) per Household	Shih-mou (acres) per Capita
Szechwan	1946	151,437 S (25,239 A)	38,957	6,352	23.8 S (3.9 A)	3.9 S (0.6 A)
	1953	151,674 S (25,279 A)	54,204	8,930	16.9 S (2.8 A)	2.8 S (0.5 A)
Sikang	1946	4,011 S (668 A)	1,668	278	14.5 S (2.4 A)	2.4 S (0.4 A)
	1953	4,111 S (685 A)	2,942	485	8.5 S (1.4 A)	1.4 S (0.2 A)
Yunnan	1946	26,215 S (4,369 A)	7,169	1,384	18.9 S (3.2 A)	3.7 S (0.6 A)
	1953	26,375 S (4,396 A)	15,201	3,005	8.7 S (1.5 A)	1.7 S (0.3 A)
Kweichow	1946	23,173 S (3,862 A)	6,182	1,193	19.4 S (3.2 A)	3.7 S (0.6 A)
	1953	23,273 S (3,879 A)	13,082	2,586	9.0 S (1.5 A)	1.8 S (0.3 A)
		Total	Total	Total	Average	Average
	1946	204,836 S (34,138 A)	53,976	9,207	19.1 S (3.2 A)	3.4 S (0.6 A)
	1953	205,433 S (34,239 A)	85,429	15,006	10.8 S (1.8 A)	1.9 S (0.3 A)

* For 1946 data, Statistical Year Book of the Republic of China, Nanking, 1948, pp. 70-71. For 1953 data, Communist census of 1953 and Chung-hua Jen-min Kung-ho-kuo Fen-sheng Ti-t'u [Atlas of the People's Republic of China by Provinces], Shanghai, 1953, pp. 42-46.

2. Ibid.

243
433
162

1:Stanford U. S-4, 5 1956 AF16 SW China
AF16

Table 5. Population in Terms of Equivalent "Adult Males"*

Province	Population	Population in Equivalent "Adult Males"
Szechwan	62,303,999	51,089,279
Sikang	3,381,064	2,772,473
Yunnan	17,472,737	14,327,644
Kweichow	15,037,310	12,330,594
Total	98,195,110	80,519,990

* In making this conversion, the co-efficient of 0.82 is used. It represents the mean between 0.76 derived by C. M. Chiao in his work, China's Food and Population, Shanghai, 1937, and 0.88 worked out by T. H. Shen in his book, Agricultural Resources of China, New York, 1951.

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF 16

101 tribe, who call themselves Na-khi, the pro.ince is not described at length. To do so it would be necessary to publish, instead of two volumes, at least ten, when one considers that the present *Yün-nan T'ung-chih* (Topography of Yün-nan) as published by the Yün-nan provincial authorities, consists of 220 *pen* 本 (books).

131 The area dealt with in this work does not lie strictly within the confines of Yün-nan, but extends to beyond its borders. It roughly comprises the land between East Longitude 98° and 103° and North Latitude 26° and 30°. This territory was never exclusively inhabited by the Mo-so or Na-khi tribe, nor was it ever a political unit under the rule of a Na-khi King or chief. To-day the area is partly in Tibet and Hsi-k'ang and partly in Yün-nan and Ssu-ch'uan, the greater part, however, being in the province of Yün-nan. It is represented in this work by four maps: Map no. 1, called Te-ch'in or A-tun-tzu; no. 2, Wei-hsi; no. 3, Li-chiang and no. 4, Yen-yüan.

162 In the area covered by map no. 1, the Na-khi live in scattered villages
131 alternating with Tibetan ones, with certain sections (on the west) occupied by other tribes, as the Lu-tzu or Nu-tzu, the Trun or Ch'iu-tzu, and Li-su on the south. The area represented by maps 2 and 3, is almost exclusively inhabited by Mo-so or Na-khi, save for a sprinkling of other tribes, such as the Miao, Chung-chia, Min-chia and Lo-lo or No-su, with Tibetans and Hsi-fan to the north. These tribes are more or less recent immigrants as are the Chinese. Map 4, comprises an area inhabited mainly by ancient Mo-so who may or may not be identical with the Na-khi of Li-chiang. Scattered among them live also Hsi-fan, Chinese, Tai or Shan as well as Lo-lo and a few Li-su. Chinese are everywhere in the minority.

1914 Various hypotheses have been put forward as to the origin of the Na-khi. Suffice it to say that they are immigrants, descendants of the Ch'iang of north-eastern Tibet, and many references substantiating this statement will be found throughout the book. Whether the Mo-so are identical with the Na-khi will ever remain a moot question. That the P'u were the original inhabitants of the present home of the Mo-so or Na-khi we learn from Chinese History. The Mo-so, first mentioned in the Annals of the T'ang dynasty, were probably less numerous and disputed the land with the P'u. Then came the descendants of the Yüeh-hsi Ch'iang who with the Mo-so dispersed the P'u and settled in their land. The name Na-khi occurs nowhere in Chinese literature and as I suggested elsewhere, was probably given the Ch'iang by the Mo-so on account of their darker complexion. The name Na-khi (*na* = black, *khi* = man) became the designation for the tribe of the territory for.erly occupied by the P'u; whether the Mo-so absorbed the Ch'iang or the Ch'iang the Mo-so remains a disputed question. The name Mo-so is of Chinese origin and is disliked by the Na-khi, it is looked upon as derogatory. I hope to be able to throw more light on this question in a future work on the religion and religious literature of the Na-khi.

000 In order gradually to introduce the reader or investigator to the history and geography of the former Na-khi Kingdom, it was deemed wise to give a description of the route from K'un-ming to Li-chiang 麗江, the ancient capital

1 [see end map 1, cat 116 ;-- Analyst]

2: Rock K-5 (1954-) 1947 AF16 Southwest China AF16
Sino-Tibetan Border AE3

Coming from the east the main approach is by either the Tso-so or Ch'ien-so T'u-ssu territory. From the north by way of Ki-bo Shan from Mu-li.

A trail leads also from the mouth of Luë-dzu valley on the Yangtze along the banks of the latter to Chung-tien, but the Zho Chhu or Shu gyi (Wu-liang Ho) must first be crossed near its mouth.

Inhabitants. — The main inhabitants of Yung-ning are the Hli-khi̲n tribe (PLATE 221), a branch of the Na-khi who speak a peculiar dialect only with difficulty understood by the Li-chiang Na-khi, who converse with them in Chinese. Genuine Li-chiang Na-khi have migrated to Yung-ning and one village, Boa-ts'o-gkv near the lamasery, is entirely inhabited by them. Lo-lo from Ssu-ch'uan have settled to the south of Yung-ning, and also lately on Mt. Yo-wa-bu to the south-west, where they have destroyed most of the forest. Chinese live in the upper and best part of Tsui-yi valley and in the rockier lower part Li-su have settled for many generations. There are undoubtedly some Hsi-fan, the original inhabitants of Mu-li, and also a floating population of Tibetans. The people of Yung-ning, that is the Hli-khin tribe, are now mainly adherents of the Yellow Lama Church (Gelug-ba sect), but their original Shaman religion still exists and is practised by the few remaining sorcerers, who are called Nda-pa (PLATE 222). Unlike the Na-khi Dto-mba or priests, they have no written language, and chant everything from memory.

Another sect called Ha-pa, which dates back to Padmasambhava, also practises its witchcraft in Yung-ning. The Ha-pa priests have their own literature, in manuscript form, several centuries old. They make blood sacrifices, mainly offering sheep at their ceremonies, and, similarly to the Dto-mba of the Na-khi, erect peculiar tower-like structures, some of which are called Nya-ta (PLATE 223), to avoid evil, etc. These priests whom the Yung-ning people call Ha-pa, are the genuine sorcerers of the Hsi-fan or Boa of Mu-li who call them Ts'a-mba.

On the banks of the Zho-Chhu dwells another branch of the Na-khi known as Zhĕr-khi̲n.[1] They speak another dialect which is, however, more closely related to that of the Li-chiang Na-khi than to the Yung-ning Hli-khi̲n. The Zhĕr-khin have a written language of their own, that is pictographs. It is similar to the Li-chiang Dto-mba script but is not understood by the latter; some of the symbols are different, and so is the dialect and pronunciation. The Yellow Lama sect and the Ha-pa sect employ the Tibetan script in their books. The ceremonies of the Nda-pa, the original Yung-ning religion, will be described in another volume dealing with the religion

[1] All Na-khi living on river banks in hot valleys, as in the Yangtze and Zho Chhu valleys, are called Zhĕr-khi or Zhĕr-khi̲n by the Li-chiang Na-khi and Yung-ning Mo-so respectively. The word *zhĕr* means to be afraid, and refers to their being afraid to come from their hot valleys to the cold snowy uplands, inhabited by the mountain Na-khi. *Zhĕr-khi̲n* is also an insulting term and any one who is stupid is called a "Zhĕr-zo" — son or child of Zhĕr; the name Zhĕr-dü (Hot land) is given to the hot river valleys. *See:* J. F. Rock, the Zhĕr-khi̲n tribe and their religious literature in *Monumenta Serica* Vol. III, Fasc. 1, 1939; pp. 171–188.

2: Rock K-5 (1934-) 1947 AF16 Southwest China AF16

obliterated in many places, making the passage of a loaded mule very dangerous. This valley becomes a canyon lower down to where it debouches into the Yangtze.

We arrive at a bluff where a beautiful vista opens towards the Yangtze and the terrific rock gate, the Gv-ho-gu gorge. This part of the valley resembles an amphitheater, on whose gentle terraced slopes a tiny hamlet also called Ggŏ-wùa is situated. Above the village under immense maple trees, one of seven feet in diameter, is a lovely clear crystal spring. The peasants are all Lü-khi or Hli-khin, save one family which is Chinese. They migrated to this place from Chiang-hsi (Kiangsi) five generations ago.

Following the Yangtze to Feng-k'o. — From the lower Ggŏ-wùa we ascend an arid, scrub-covered terrain to a pass, and then descend over a most terrible trail of only a hand's width. Some ten years ago the entire, almost vertical mountain-side, several hundred feet in height, slid down into the valley carrying with it a small hamlet situated on a terrace high above the old trail. Man and beast perished, only one or two houses remained standing. The entire mountain-side in this valley is loose gravel, broken shale and schist. The trail is indeed a dangerous one and difficult to negotiate on account of constant landslides. After skirting this perilous place, we ascend gradually to another tiny hamlet of a few huts, called A-shi-wua-lo. The trail now leads to a pass and a circular depression, the bed of an old pond at an elevation of 8,800 feet (PLATE 232) whence we can overlook the entire Yangtze valley. The mountains, whose slopes are covered with *Heteropogon contortus* grass, are here dissected into many deep gorges, which debouch into the terrific canyon along which our trail leads. The walls drop almost vertically to the narrow valley floor, which sends foaming torrents into the Yangtze; the whole scenery is of indescribable magnificence.

Steeply we descend over the grassy spur along a narrow ravine, one trail leading down into it, while another leads along its crest. To the right (north) on a little terrace nestled against the steep mountains is the hamlet of Ba-a at 6,500 feet elevation. This trail is a terror to the muleteers; in wet weather it is as slippery as ice, on account of the yellow clay of which the hills are here composed. The heat is intense in the middle of the day, there is no shade as the hills are devoid of trees and only covered with the reddish-brown Heteropogon grass.

We come to the hamlet of Law-k'a-khi-llü [also called P'u-djü or Pu-chio 卜脚 or 卜鳴]. The hamlet is divided into two parts by the valley called Bu-k'o and its torrent, which descends from Wua-ha Shan (Ta-yao Shan), Yo-wa-bu and Ggŏ-wùa valley. A small hamlet called Wùa-sha-lo is situated in the ravine. Here the peasants speak both Li-chiang Na-khi and Yung-ning Mo-so or Hli-dü. Below Law-k'a-khi-llü there is a fierce rapid in the Yangtze which here makes a bend in its narrow canyon. The trail leads down to the torrent of the Bu-k'o djï which must be forded, an impossible feat in the rainy season. From here it is 10 li over the grassy slopes to the Feng-k'o ferry. A Tibetan (mchhod-rten མཆོད་རྟེན) chhorten [the equiva-

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16
Pai-i AE7

S
101 anywhere else. These are the Nga-ch'angs or A-ch'angs, called Chang by the Shans. These people's language is closely connected with Burmese, and is still more like the language of the Szi, Lashi, and Maru tribes[1] who inhabit the Kachin Hills. It has no resemblance to Shan, except the general likeness which connects all the Indo-Chinese languages. The A-ch'angs are often described as Ho-hsa Shans or, in Burmese, Maingtha Shans, and they have adopted Shan customs, dress, and religion so completely that they will even speak of themselves as Shans. But if further questioned they will always allow that they are not really of the Shan race. In feature too there is a noticeable difference between the two peoples.

S
162 The A-ch'angs, however, are not the only inhabitants of this little valley. Its height above the sea is 4500 feet, and it is consequently cold enough and healthy enough for Chinamen to live in, and there are a great number of them in the valley, most of whom have been settled here for some generations. From what the sawbwas told me there are 4000 houses in the two states, of which perhaps a third are inhabited by Chinese or half Chinese families.

S
P
622 The sawbwas are both of Chinese extraction. Their ancestors came from Ch'ung-ch'ing Fu (Ch'ung-k'ing) in eastern Ssŭ-ch'uan 400 or 500 years ago. They were sent by the Chinese Government to repress disturbances which had broken out on the border, and were rewarded for their services by being made rulers of these two states. The sawbwas of Möng Na, San-ta and Möng Ti (Nan-tien) are also of Chinese origin, while the Möng Wan and Möng Mow chiefs are genuine Shans. The whole of these sawbwas, however, intermarry with each others' families and have become practically Shans, and would not now call themselves Chinese.

On the 16th January we had an ascent of 1000 feet and a long and steep descent of nearly 3000 feet into the valley of the Taping, and crossed the river, a slow sandy stream 300 yards wide, by boat to the village of Manwaing[2].

[1] For vocabularies, see pocket in cover.

[2] This place is usually called by us by its Burmese name of Manwaing or Manwyne. Its proper Shan name is Man-ving, which has been corrupted by the Chinese into Man-yün.

38 *Sadon to T'êng-yüeh T'ing (Momien)*

000 horizon with which I took latitudes every clear night. My maximum and minimum thermometers very soon got out of order and defied all my efforts to get them right again. The survey was done on a scale of four miles to the inch, and I tried as far as possible to get in all the country that came in sight rather than to put in with minute accuracy the part near the road.

133 Soon after leaving camp we crossed the actual watershed which is presumably the boundary. They say there was formerly a boundary "gate" here called Shên-hu-kuan. From all this part of the road there are magnificent views of the surrounding country. To the south the hills near Sima are plainly visible. To the south-east in a nearer range of hills the gap is seen through which the road from Mêng-tien to San-ta passes, and beyond this gap is visible another range which is probably that which divides Möng Na from Ho-hsa. Far away to the east can be seen a high mountain chain which separates the Shweli from the Salween. To the north this range stretches away till it is hidden by the spurs of Tabu Pum; to the south it culminates in a very high and prominent conical hill called Kao-li-kung which is about 12,000 feet high. South of this the range seems to get lower very rapidly.

[162] [241] A steep descent of 1,400 feet brought us into the little Mêng-ka paddy plain which is inhabited by Chinese and Li-sos. The land is all cultivated but is not fertile, and the people do not get much more than a bare living off it. The head-man put me up in his house and I determined to halt here over the 7th, so as to write to the San-si sawbwa to tell him I was coming the next day.

A Shan silversmith from San-ta was a fellow-guest in Yang's house—rather an intelligent man who professed great contempt for the Chinese of Mêng-ka. Certainly the Shans are in many ways a much more civilised race than the Chinese.

579 On the morning of the 7th news came in that a caravan of Chinese traders on their way from Manwaing to Mogaung had been attacked by Kachins at a place called Möng-lawng[1]. Six mules with their loads had been stolen,

[1] I believe this to be the Shan form of the name marked on the Survey of India map as Ma-lau.

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

622 looked on with suspicion by the Chinese Government, owing to a rebellion which his elder brother and predecessor started three years before. He is now only allowed to rule over the purely Shan villages of the State, those places in which there are any Chinamen living being administered by the Chinese head-man at Kuan-shang[1].

From the account given to my interpreter by this individual, my arrival on the boundary seems to have caused no small stir both at San-si and at T'êng-yüeh. The news was at once sent on to the T'êng-yüeh official, and the 50 soldiers who form the garrison of San-si were sent up to the Lao-kuan-ch'êng Gate and slept there a night. The excitement was not allayed till my messenger from Mêng-ka arrived with the news that the 200 infantry and 60 cavalry had resolved themselves into 10 baggage mules and seven unarmed men.

●162 The inhabitants of San-si are chiefly Shan, but there is
361 also a considerable Chinese population, amounting perhaps
133 to one sixth or one eighth of the whole. The Taping river runs through the plain from north to south, and it is noticeable that the Shan villages on its right bank are all surrounded by walls, as a protection no doubt against the Kachins who inhabit the hills to the west. The San-si plain is in this latitude the eastern boundary of the Kachin country, the hills to the east of it being peopled by Chinese. The height of the plain is only 3,300 feet.

On the 12th January we crossed the Taping by ferry. The river averages 80 yards in width and at this time of year there are places where waist-deep fords can be found in it. A good deal of hill climbing brought us to the small village of Hsiao-ti-fang where we camped for the night. Here again there was unmelted ice all day, and the night was very cold.

361 This, like many of the frontier villages, was originally a military post placed here by the Chinese authorities to control the border tribes. They have now, however, been settled down as farmers for many generations, though I believe they still receive some small pay or remission of taxes from the Chinese Government. It is probably by

[1] I heard on a subsequent journey that San-si had been handed over to the Sawbwa of Mong Ti (Nan-tien), but do not know if this is true.

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

used to hearing objections of this sort raised, and it did not make me change my mind.

On the 5th February we left Ta-li and went back to Hsia-kuan, and on the 6th started for Shun-ning. The road leads up a big range, reaching the top at 8,700 feet. They say there is usually snow on this pass at this time of year, but the winter happened to be an exceptionally mild one. From here a long winding descent brought us into the northern end of the Mêng-hua plain at the village of Hsün-chien, where there is a particularly good inn.

The plain is some 25 miles long and three or four miles wide, with a small stream, which is the source of the Red River, running southwards down the middle of it. Its height is about 6000 feet. The inhabitants are Chinese and Panthays, the latter being in considerable numbers but not in a majority. The town lies at the southern end of the plain, and I did not see it at this time, but passed through it in a subsequent journey in 1898[1].

Mêng-hua is celebrated in the ancient history of Yün-nan as the scene of a deliberately planned murder, by which the Nan-chao kingdom was founded. At that time central Yün-nan was divided into six little states, but Pi-lo-ko, the prince of Mêng-hua, being a man of enterprising mind, invited his five royal neighbours to a feast. He had previously constructed a specially inflammable house of pine wood, and having made his guests dead drunk, set fire to the building and burnt them all. He thus combined the six kingdoms under his own rule and soon afterwards moved his capital to the Ta-li plain. This was in A.D. 731, and the kingdom continued with various changes of dynasty till it was subdued by the Mongols in the thirteenth century.

The next morning the *ch'ai*[2] sent with me as escort divulged the fact that he was not after all to accompany me to Shun-ning, but was to go to Mêng-hua. It appears that the *Hsien*[3] of Ta-li, after agreeing to send him with me to Shun-ning, had been subsequently struck by the great responsibility he was taking on himself in doing so, and had consulted on the matter with the *Fu*[4]. The result

[1] See p. 147. [2] Policeman. [3] Magistrate.
[4] The Fu district official, sometimes called the *prefect* by Europeans in China.

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16
Pai-i AE7

000 we had a long descent of over 3000 feet to Wan-nien-chuang. This village is Chinese, but Se-pyek a mile further on is inhabited by Shans, among whom are included some Hküns, the branch of the Tai race who inhabit Keng Tung, one of the Southern Shan States.

There appear to be several Hkün families living among the Chinese Shans of this neighbourhood. How they had got here they did not seem to know. It may be conjectured that some rebellion in or invasion of their native S state had compelled them to emigrate to such a distance. P The Chinese name for this race of Shans is K'ên-tzŭ.

631 Wan-nien-chuang marks the boundary between the district of Mien-ning and the Shan State of Kêng-ma[1]. This is one of the largest of the Chinese Shan States and S besides the Kêng-ma plain includes the districts of Mêng-P sa, Mêng-yung and Mêng-chien[2]. We were now in a [162] country in which there are very few Chinese. The plains are all inhabited by Shans, and the hills by Las, Lo-los, and La-hus, with a few scattered Chinese villages among them. The Lo-los are many of them of the Mêng-hua Lo-lo tribe. The Shans call them *Myen*, which is the usual Shan name for all branches of the Lo-lo race. The La-hus, called Lo-hei by the Chinese and Mu-hsö or Myen Mu-hsö by the Shans, inhabit a good deal of the country between S the Salween and the Mekong, and stretch down into Keng P Tung and northern Siam.

361 It rained a good deal in the night and the next morning, so we made a late start and did a short march of 7½ miles to Mêng-yung, a little Shan town of 180 houses surrounded by a mud wall. It is built on the right bank of a narrow stream running in a deep ravine. The plain is a very small one with little cultivation and contains no Shan villages except the town. I put up in a large well-built Shan monastery, and was an object of immense curiosity to the whole of the inhabitants of Mêng-yung.

000 Two marches from here brought us to Mêng-sa. The road there from Mang-hkü, where we slept on the 27th, after a little level going, begins to ascend up a narrow gorge by a paved road. Near the top it becomes steeper,

[1] Kŏng-ma in Shan.
[2] Möng Hsa, Möng Yawng, and Möng Kyen in Shan.

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16 •
Pai-1 AE7

range of hills and on the next day dropped steeply down to the Nam Ting valley at Mêng-chien. During this descent we passed through the mixed La and Chinese village of Ta-chai. This contains 450 houses, and though it is a hill village is quite the largest place in this part of the Chinese Shan States. It has some very fine trees round it and the hillsides are well cultivated. It is noticeable that the Las and Was live in much larger villages than any other hill tribe of Yün-nan.

Mêng-chien or Möng Kyen is a small place of no importance, inhabited by Shans. Its height is only 1,850 feet, the Nam Ting valley being one of the lowest parts of Yün-nan. In this warm climate the fresh green grass was already several inches high, and our mules got better grazing than they had had for a long time.

On the 3rd and 4th of March our road was nearly level, leading down the Nam Ting valley, chiefly through pretty thick jungle, with occasionally a Shan village and a patch of rice cultivation where a tributary stream joins the main river. Finally we emerged into the Mêng-ting[1] plain, which is 10 miles long and three miles wide with the river running down its northern edge. There are several villages scattered about in it, each surrounded by fine clumps of bamboo. The people are partly Chinese Shans and partly Southern Shans, the former predominating; but the population is not very large and there is a good deal of land uncultivated. Mêng-ting is a very small state, and only the lower or western part of this plain belongs to it, the upper half being part of Kêng-ma. The town which is unwalled is built in two bits, separated by a small tributary of the Nam Ting, the sawbwa's residence lying on the right bank, and the market village on the left bank. During the dry season it is visited by a good many Panthay traders from Panglong, and I saw a large bullock caravan which had come from Nam-hkam with salt fish and cotton clothes.

I proposed to go and see the sawbwa, but a message arrived to say that he was ill and not up to receiving visitors. As a matter of fact there was nothing whatever the matter with him, but being of rather a nervous dis-

[1] Also called Hun-ting by the Chinese. Möng Ting is its Shan name.

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16
Sino-Tibetan Border AE3

he began to make excuses, and evidently did not like the idea. I did not want to run the chance of making any trouble in a country part of which was nominally in our territory, so I determined to take the Mêng-ting road, which being much the more level of the two would be perhaps more likely than the other to become a trade route.

On the 12th March I left Nam-hu. The jungle here is full of pea fowl and jungle fowl, and within a few miles of Kun-long there is generally a herd of elephants to be found. We took the same road by which we had come and reached Mêng-ting on the 13th. The sawbwa sent a message to say that he would give me men to go with me to Mêng-ko, but warned me that the Las along that road had held a meeting a year or two ago and decided that no Englishman was to be allowed through their country, so that he (the sawbwa) would not be responsible for anything that might happen, and would recommend my taking the road round by Kêng-ma which was quite safe.

The sawbwa's willingness to send guides with me did not look as if he anticipated that I should have any serious difficulty, so I determined to stick to my intention to go by the Mêng-ko road. Accordingly the next day we started with an escort of two of the sawbwa's men, one armed with a gun, the other with a spear.

Two thousand feet of ascent took us to Man-hsak, a village containing a monastery and 50 houses, inhabited by people who said they were Shans but had decidedly La features. Those Las who have become Buddhists have rather a weakness for calling themselves Shans, and even the Shans themselves will often speak of them as Tai Loi or Hill Shans.

The Las and Was are found in considerable numbers in the hills throughout Chên-k'ang (Möng-Cheng), Kêng-ma, and the other Chinese Shan States which lie between the Salween and the Mekong. They also form the bulk of the population in the independent Wa country which lies to the south of this on the borders of China and Burma.

There seems to be no way of drawing a definite distinction between the La and the Wa. The wild Was appear to call themselves Wa, but I could not hear of any group of the race who call themselves La in their own language.

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

My very rough methods of calculation naturally give only an approximate result, but in default of any better estimate the population of Yün-nan may be taken as about ten millions[1].

This population is divided between very sparsely peopled mountains, which form the greater part of Yün-nan, and very thickly inhabited plains which, though they only comprise about a fifteenth of the area of the province, contains nearly half of its inhabitants.

In the plains the population is mainly Chinese[2], but not entirely so, for in the cold plateaus of the north-west are found Tibetans, while many of the low-lying plains of the south are inhabited by Shans. Moreover in the centre of the province some of the plains are peopled by Ming-chias, while an admixture of Lo-los is occasionally found. At a guess I should say that about four-fifths to nine-tenths of the population of the plains are Chinese, including under this name those who, even if of aboriginal extraction, are now in language and customs undistinguishable from the ruling race.

In the hills things are different. Here, as in the plains, one also finds the Chinese, and there is no large tract of country without Chinese villages in it. But living among them and forming the bulk of the hill population are numerous other tribes, each with its own language and its own customs[3].

In the north-west corner are Tibetans, and the semi-Tibetan Mo-so race. On the Burmese border are Kachins and Palaungs; also in the west of the province, but extending further into the interior, are the Li-sos; everywhere throughout Yün-nan are the Lo-los, a fine race and more numerous than any other hill tribe. Equally widely distributed are the Miaos, but they are only found in small and scattered communities. In the south-west, between the Salween and the Mekong, are the La-hus, who with their cross-bows and poisoned arrows proved formidable

[1] Some recent Chinese figures give Yün-nan a population of about 12,000,000, but these are said to be unreliable. The late Mr Litton, of the Consular Service, who had much experience of Yün-nan, estimated the number of inhabitants at 9,000,000.

[2] Among the Chinese I include the Panthays or Chinese Mahommedans.

[3] For details about these tribes see Appendix VIII.

5: Davies G-5 (1894-1900) 1909 AF16 Southwest China AF16

162 foes to the Chinese troops a few years ago. Near them
563 live the Was, many of whom are still unconquered and still carry on their head-hunting raids. Their relatives, the somewhat more civilised Las, occupy much of the country near the southern part of the Burma-Yün-nan frontier. In the south of Yün-nan are the P'u-mans; and further east are the Wo-nis and many other tribes speaking Lo-lo dialects. The Shans and Ming-chias I omit, as they are not properly speaking hill tribes but live in the plains and valleys.

To form an estimate of the relative numbers of the Chinese and non-Chinese population in the hills is a difficult task. With the possible exception of the Lo-los the Chinese would doubtless outnumber any *one* other tribe, but still there are many tracts of country where they are decidedly in the minority. To say that the Chinese form one-third of the inhabitants of the hills, and other tribes the remaining two-thirds would perhaps not be very wide of the mark. This is merely a rough estimate, the result of impressions gained from travelling over the country, and must be taken only for what it is worth.

7: Hu K-5 (1934-) 1946 AF16 Southwest China AF16

areas of vegetation associations within the Basin[1] (Fig. 8). They are, first, the pine-cypress-banyan-bamboo association, occupying a large portion of the central and southern part of the Basin; second, the dense mixed coniferous-deciduous--mainly chestnuts (Castanea), oak (Quercus), and sweet gum (Liquidambar)--grassland associations, occupying the highland areas surrounding the Basin; and third, the coniferous (composed of mainly the Genera Abies, Picea, Tsuga, and Larix) grassland-Rhododendron associations, occupying a large part of the western Basin. 137

Particularly in the third of the areas mentioned in the preceding paragraph altitudinal zonation of vegetation is clearly shown.[2] As a rule the forests are on higher levels, whereas the intermediate slopes are covered with grass vegetation. Northwest of the Basin there lies the well-known "prairie" area, including both the tall bunch and short grasses (mostly stipa and some thick sods of Avena and Festuca) developed on the degenerated chernozem soils of the Sung-pan districts.

4. Soils

As soils will be discussed in more detail in connection with the agricultural land use, only the principal soil regions will be mentioned at this point. Generally speaking, there are three soil regions of major significance in the Basin[3] (Fig. 9), namely, (1) the purple-brown (forest) soils, distributed in most parts of the Basin, (2) the non-calcareous alluvium and rice paddy soils mainly in Chengtu Plain and some other minor river valleys, and (3) the slightly to moderately podsolized old and young yellow earths found in the peripheral highland and anticlinal ridge areas of the Basin. 134

B. Major Elements in the Cultural Landscape of the Basin

1. Population Patterns

The most striking feature of the population pattern of the Szechuan Basin is that with the exception of the areas around 162

---

[1] C. S. Fang, Personal correspondence, April 16, 1941.

[2] Ibid.

[3] J. Thorp, Soil Geography of China, Plate 1, 1936.

●162 Chengtu Plain, the population density decreases from the interior of the Basin toward its fringes (Fig. 10).[1a] This generalization is more nearly true in the northern part than in the southern part of the Basin.

In most cases, the average population density of peripheral Hsiens, as previously mentioned, ranges between 11 and 50 persons per square kilometer. This density is much lower than that in the interior areas of the Basin (Fig. 10). Such a condition clearly demonstrates one very significant fact, that is, the close adjustment of population to relief in Szechuan Basin. As already pointed out, the general topography of the Basin tends to be more rugged as one moves from the interior of the Basin toward its periphery. A comparison of the Relief Map (Fig. 2) and the population density map (Fig. 10) emphasizes the remarkably high degree of coincidence between these two patterns. In other words, in areas where the surface configuration is more rugged (as in the fringing areas of the Basin) the population density is lower than in the more nearly level areas.

The actual population distribution and population densities of the Basin, owing to the great diversity of its topography, soil, climate, agricultural and other products are by no means uniform. Generally speaking, the Basin displays five densely populated areas, namely, the Chengtu Plain, the central and lower To River Valley, the south central industrial area, the central and lower Fou River Valley, and the discontinuous areas of Chu-hsien-Chung-hsien-Changshou areas in the eastern Basin (Fig. 10). As we shall see subsequently these five densely populated areas correspond fairly closely with the five principal agricultural areas of the Basin.[1] The first two are the richest two agricultural regions of the Basin.

The Chengtu Plain--the first of the five densely peopled areas--with its flat topography, ever-renewed fertile soil, and excellent irrigation systems, is the most prosperous agricultural area, and has the highest population density within the Basin. The average density is more than 500 persons per square kilometer. In some districts the average density runs as high as 600 persons or more per kilometer. These include the districts of Pi-hsien, Hsing-fang, and Wenchiang, west of Chengtu (Fig. 10 and also Fig.11 on index map of Hsien). Here, in addition to the rice culture

[1]See Figure 24.

19 [See end map 6 -- Analyst]

7: Hu K-5 (1934-) 1946 AF16 Southwest China AF16

162

which is universal throughout the Chengtu Plain, the specialization and the extensive production of tobacco[1] (reputed to be the finest in China for cigar-making) has increased the returns from farming and made possible this unusually high population density. The only districts of the Plain, which have comparatively lower population densities (below 350 persons per square kilometer) are Tsung-ching and Kuan-hsien (Fig. 10). The explanation for this situation lies mainly in the fact that these two districts have higher local relief and are handicapped by insufficient water for irrigation. For instance, on account of the lack of irrigation, rice is not widely grown in Tsung-ching. But, on the whole, in so far as the population density and the capacity for agricultural production are concerned, Chengtu Plain compares favorably with the Delta area of the Yangtse.[2]

The rich horticultural and sugar cane producing area[3] of the upper central To River Valley constitutes the second high population density area of the Basin (Fig. 10). Here, the average density is around 400 persons per square kilometer. With its comparatively flattish topography--probably the flattest next to Chengtu Plain--and its rich sugar cane production, the lower and central To Valley is agriculturally one of the most prosperous areas of the Basin.

The south central industrial area, including the districts of Fu-shun, Lung-chang, Yung-chang, and Pih-shan represents the third of the high-population-density areas (Fig. 10). Here lies the world-famous salt-brine mining district of the Basin. This is perhaps the only important industrial center of the whole Basin. It is reported that in Tze-kung area alone, there are more than 400,000 people, two-thirds of whom are said to be engaged in salt production and other manufacturing activities. In addition to salt, large quantities of coal are produced. The average population density in this area is well over 400 persons per square kilometer.

The central and lower Fou River Valley, including the districts of San-tai, Shei-hung, Sui-ning, Peng-hsi, and Nan-chung,

---

[1] See Figure 37.

[2] P. M. Roxby, "The Distribution of Population in China," Geographical Review, XV, No. 1 (1925), 1-24 (Map).

[3] See also Figure 37.

7: Hu K-5 (1934-) 1946 AF16 Southwest China AF16

● 162 noted for their specialization and rich production of the famous yellow silk and for cotton and herbs, is the fourth densely peopled area. The average density in this area exceeds 350 persons per square kilometer. This area represents the richest agricultural part of the northern Basin.

The fifth area with a high density of population consists of a discontinuous tract of districts, including Chu-hsien, Chung-hsien, and Chang-shou north and east of Chung-king. These districts lie within the longitudinal anticline areas of the Basin, and in most places their topography is mountainous and rugged. The population density in this section of the Basin, as a whole, is low (Fig. 10). The exceptionally high population density of the discontinuous tracts mentioned above (with an average density of over 300 persons per square kilometer) probably is due to the rapidly increasing development of tung tree and coal productions during the recent years. This development has increased considerably the population-support capacity of these districts, as compared to the surrounding areas.

Outside of these five high population density areas, most of the districts of the Basin have a population density of about 250 to 350 persons per square kilometer. This approaches the average density (285 persons per square kilometer) for the Basin as a whole. In general, this average density is comparatively lower than the average density of the lower Yangtse Delta area, but is somewhat higher than the rural area of North China.[1]

Although many agriculturalists[2] classify Szechuan Basin as a "rice region," actually, on account of its rugged topography and deficient water supply, only a part of the hilly areas are used for rice culture. These are the "ti-tien" or ladder lands (terraces). On the other hand, considerable portions of these lands are devoted to unirrigated or "dry" crops, such as corn, potatoes, kaoliang, wheat, barley, millet, and others. This fact explains perhaps why the Basin, as a whole, in so far as population density is concerned, lies at a midway position between the higher densities of the rice region of the Yangtse Delta and the lower densities of the wheat region of North China.

---

[1] Hu, op. cit., p. 26.

[2] Buck, op. cit., p. 78.

7: Hu K-5 (1934-) 1946 AF16 Southwest China AF16

437 farms here are within a few miles of a market. Each town has usually three or four market days per week, which alternate with those of the neighboring towns. The larger places have a daily
437 market. The produce is usually carried on men's backs on shoulder poles, or loaded on wheelbarrows. The noise of the wheelbarrows
489 on the stone-paved roads in the quiet of the early morning is as genuinely Chengtu Plain as many of its other unique landscape features. This peculiar noise, together with that much-advertised smell of night soil in the oriental farm fields, adds another unique double feature to the already too-colorful Chengtu-Plain landscape.

Moreover, in spite of the obstruction of irrigation dams, the extensive inter-communicating canal systems in the Plain help provide channels by way of which many of the villagers in the Plain can send their produce (such as vegetables, fruits, poultry, pork, and other products) to the city or to other towns by boat. And at the same time they bring home their purchases by the same conveyance. The canals thus facilitate considerably the otherwise very difficult transportation conditions. Here reminds one of the similar scene, though on a much smaller scale, which is commonly seen in the Great-Lake Canal regions (such as the Wu-shih and Soochow areas) of the Lower Yangtse Delta.

226 g) Practice of aqui-culture.--Because there are thousands of acres of ponds and water-covered paddy fields in Chengtu Plain, aqui-culture is also practiced here. The principal activity along this line is fishing--for fish, frogs, snails, and crabs. Cormorant fishing is particularly characteristic. Because the Min River and other streams in this area are fairly clear during some months of the year, the fish can be easily seen as they hurry upstream to spawn. Thus, the cormorant catch is generally very successful here. Other phases of aqui-culture include digging for aquatic plants, such as lotus seeds, water chestnuts (Trapa nateus), and Calladum, which are all delicacies to the people here.

● 162 Chengtu Plain occupies an area of approximately 6,000 square kilometers, about one-twenty-fifth of the total area of the Basin proper, as delimited in the present study. But it has a population of more than 4,000,000 people, or about one-twelfth of the total population of the province. The average population density of Chengtu Plain is a little over 700 persons per square kilometer, or nearly 1,800 persons per square mile. Nowhere in

7: Hu K-5 (1934-) 1946 AF16 Southwest China AF16

China, with the possible exception of the Lower Yangtse Delta region, is the average population density so high. It is, of course, made possible only by the tremendous productivity and the intensity of agricultural land-use in the Plain. 162 ●

h) Irrigation works of Chengtu Plain--Tu Chiang Yen as the nerve center.--The Tu-chiang-yen irrigation works, built 2,200 years ago, when applied science was yet unknown in Europe, is one of China's best known ancient engineering feats, and is one of the two oldest irrigation works in all China. It is this system which is largely responsible for the fertility of Chengtu Plain, commonly known in Chinese history as the "Heavenly country." It is also because of this system that this "Heavenly country" has experienced only 17 minor droughts and floods in the last twenty-two centuries. 312

(1) Historical development.--The Tu-chiang-yen system was devised to harness the waters of the mighty Min[1] on their way down from the Tibetan Plateau in order to irrigate the farm-lands in 14 districts of western Szechuan Basin. According to Shih-Chi, in the earliest Chinese historical Annals,[2] the system was first constructed by General Li Ping and his son, in 316 B.C., immediately after the conquest of Szechuan (then the Shu State) by the feudal Chin State (Shensi). The annals read: "In Shu (Szechuan), the governor cut a canal through Chengtu to connect the navigable rivers in the region into one system."[3]

---

[1]We owe to the Ming explorer and geographer, Hsu Hsia Ke (1586-1641) the first appreciation of the actual relationship between the present Yangtse and its tributaries, as understood today. It is interesting to note that prior to his clarification, the Chinese for centuries, regarded the Min, because of its huge volume and torrential flow, as the upper stream of the Yangtse itself. It was not until Hsu Hsia Ke, who first ascended the Yangtse, that it became an established fact that the Ching Sha River was the upstream of the Yangtse itself. This was about one century earlier than the Jesuit Fathers who first compiled the Celebrated Atlas of Imperial China (cf. V. K. Ting, "Hsu Hsia Ke, Explorer and Geographer," New China Review, III [1921], 336-37).

[2]Ssu Ma Chien, Historical Annals, Vol. XXIX, Books on Rivers and Canals, p. 2.

[3]During recent years, a number of students of the subject have refused to accept the fact that Li Ping was the builder of the system, and have asserted that a man named Pieh Ning or Kai King (a minister of the Shu State) initiated these irrigation works, several hundred years before Li Ping. They contend that Li Ping only extended the system and improved it, but did not

7: Hu K-5 (1934-) 1946 AF16 Southwest China AF16

Another interesting characteristic of this agricultural area of the northern Basin is that this area is the most important producing center of a very important semi-agricultural product, the herbs, in the Basin. In addition to the meager subsistent agricultural production, the herb furnishes as a very important "cash crop" for the farmers. This is mainly due to the fact that in this area there are large tracts of land where the slope is too steep and the soils are too shallow for regular crop production. These lands are used, either in cultivated form or in "wild growths" for herbs.

Other outstanding features of this agricultural area include its moderate population density (Fig. 10), its specially thick cypress growths, and the conspicuous absence of coal, iron, nanmu, and pine vegetations.

4. The Combined Agricultural and Forestry Area of the Eastern Basin

In terms of both the agricultural prosperity and the general appearance of its agricultural landscape, this combined agricultural-forestry area of the eastern Basin (Fig. 24) is the least attractive and poorest. Here the topography is dominated by the numerous steep high parallel anticlinal ridges. Plains and gentle hills are even more restricted.

As to soils, in addition to the usual "purple-brown" type of the Basin, there are numerous tracts of soils, old and young yellow earths, which are derived from limestone parental materials. In most cases these soils are shallower in depths than the purple-brown type and are much slower in the rate of renewal. These factors handicap considerably its efficient agricultural production.

The principal crops here are potatoes, hemp, rice, corn, wheat, and kaoliang. Although rice is reported to be grown in every district of this agricultural area, its acreage is more limited here than in any other agricultural area.

The agricultural land-use of this area is controlled largely by its topography. Agricultural lands here are derived from two principal sources, first, on the manger-like trough lands at the top of the broad anticlines wherever the bed rocks happen to be less resistant than the surrounding structures. These trough lands are, however, rather restricted in extensions.

2: Wiens G-4 (no date) 1954 AF17 South China AF17
Southwest China AF16

mometer in the 40's and 50's, with frequent light but prolonged drizzling rains that create chilly, uncomfortable sensible temperatures. Almost year-round plant cultivation occurs in most of the Basin, so that Ling-nan and Ssu-ch'uan have much in common. In the plateau lands of Kuei-chou, Yun-nan and Hsi-k'ang, a different situation prevails. Some of the basin-lands of Kuei-chou share the high humidity and other climatic characteristics of Ssu-ch'uan, but the mountain lands and slopes are cool moist areas with rather poor soils, frequently shrouded in fog.

The Yun-nan Plateau, on the other hand, emerges above the winter mantle of cloud that covers Ssu-ch'uan and has a delightful winter climate like that of North China in late spring. The high altitude of over 6500 feet makes for mild sunshiney winters and cool summers in spite of fairly high rainfall and the low latitudes. At Ho-k'ou where the Yuan or Red River runs out of the province into Vietnam, the rainfall averages 48 inches annually. At T'eng-ch'ung (T'e¬g-yueh) near the Bhamo frontier of Burma, the rainfall rises to 58 inches per year. In the central lake basin area as exemplified by K'un-ming, the rainfall is reduced to 40 inches, decreasing northwestward with the increasing altitudes and increasing distances from the seas. At Li-chiang near the Hsi-k'ang border, the rainfall drops to 26 inches annually.[14]

While the plateau heights provide a pleasant and invigorating climate, there is a sudden change in the lower altitudes of the deep ravines and basin lands under 4300

* * *

Photo 5. Lu-ku Lake, Hsi-k'ang Province (27°43' N, 100° 48' E)

At Lu-ku Lake in the center background, the viewer sees the picture of the eroded surface of the eastern part of the Tibetan High Plateau. Known as Cham, this part of the high plateau was constituted the province of Hsi-k'ang by the Manchu Government in 1906. It is inhabited by East Tibetan peoples such as the Fan, Nakhi and Ku-tsung. Han-Chinese settlers find the land inhospitable for their culture, since the elevations even in the lower parts seen in this photo are between 10,000-15,000 feet. The still relatively level surfaces of the plateau in the foreground are deeply gashed by the snow-flanked ravines. On the central one are cultivated fields of Tibetan tribes.